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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,558	12/21/2001	Frederick L. Martin	CM03052J	4640

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MOTOROLA, INC
INTELLECTUAL PROPERTY SECTION
LAW DEPT
8000 WEST SUNRISE BLVD
FT LAUDERDAL, FL 33322

EXAMINER

NGUYEN, SIMON

ART UNIT PAPER NUMBER

2685

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,558

Applicant(s)

MARTIN ET AL.

Examiner

SIMON D NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-18 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 19, 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Bockelman (6,510,191 B2).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Bockelman discloses a digital synthesizer (abstract), comprising:

a first clock signal source (4) for outputting a first clock signal (figs. 1-2);

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a delay line (16) including: a delay line input coupled to the first clock signal source; and a plurality of delay line output taps (T0-T9) (figs.1-4, column 2 line 58 to column 3 lines 5, 40-67);

a plurality of multiplexers (18) each of which include; a plurality of multiplexer inputs coupled to the plurality of delay line output taps; one multiplexer address inputs(7); and a multiplexer output (output clock signal); a controller (12) including; a plurality of control signal outputs coupled to the one multiplexer address inputs (7) of the plurality of multiplexers (figs 1-4, column 2 lines 4-6, 58-67, column 3 lines 1-5, 41-67).

Regarding claims 3-4, these claims are rejected for the same reason as set forth in claim 1.

Regarding claim 2, Bockelman further discloses a window of time (a lookup table (20) (column 6 lines 18-23, 56-67, fig. 2).

Regarding claims 5, Bockelman further discloses a controller coupled to the one or more address inputs of the plurality of multiplexers (figs.1-2, column 1 line 62 to column 2 line 6).

Regarding claim 6, this claim is rejected for the same reason as set forth in claim 1, wherein the multiplexer (18) coupled the plurality output taps to a common output (an output signal generated by MUX 18 of fig. 2) whereby a signal at a second frequency that exceeds the first frequency is output at the common output (MUX selects a desired clock signal having a normalized ideal phase delay in a plurality of clock signals) (column 3 lines 64-67, column 5 lines 26-60, column 7 lines 5-8, column 10 lines 8-16).

Regarding claim 7, Bockelman further discloses the delay line output taps are spaced by about a fraction of a period of the clock signal wherein the delay line is characterized by a propagation delay length of the fraction times the period of the clock signal (figs.4-6, columns 2 lines 7-57, column 4-5).

Regarding claim 19, this claim is rejected for the same reason as set forth in claim 1, wherein Bockelman further discloses a zeroth tap(T_0) and a last tap (T_{71}) (fig.4) wherein the plurality of taps inputted to a selection unit (18) to have an output as a desired frequency (to sampling unit).

Regarding claim 21-24, Bockelman further discloses each clock signal period (cycle) selecting a plurality of taps that are spaced from each other by delays that when divided by a cycle of the clock signal yield remainders that are about equal to integer multiples of a generated signal cycle, how to select a last selected tap and how to select a last selected tap by a first propagation delay and a successive $(k+1)$ th clock signal; a first selected tap or zeroth tap (T_0) (figs. 4-6, column 2 lines 21-57, column 4 lines 35-67).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 8 is rejected under 35 U.S.C. 103(a) as being obvious over Bockelman (6,510,191) in view of Gore et al. (6,484,038).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claim 8, this claim is rejected for the same reason as set forth in claim 1. However, Bockelman does not specifically disclose the digital synthesizer implemented in a wireless communication device.

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Gore discloses a mobile telephone (abstract), wherein the mobile telephone comprises a mixer (12) for mixing a clock signal from a digital synthesizer (14) and a signal received from a duplexor (12) (figs. 1-2, column 2 lines 25-32). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Bockelman, modified by Gore to eliminate spurious signal contained in an output in order to improve frequency performance.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being obvious over Bockelman (6,510,191) in view of Gordy (6,346,477).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the

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reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claim 20, Bockelman fails to teach reducing a pulse width of the clock signal.

Gordy discloses a synthesizer for generating a clock signal comprising the step of reducing a pulse width of the clock signal (column 6 lines 45-46). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Bockelman, modified by Gordy in order to derive a relatively phase-stable clock signal from the irregularly spaced pulses.

Allowable Subject Matter

6. Claims 9-18 are allowed.

Regarding claim 9, the prior art of record fails to teach or suggest a plurality of gate signal delay lines, each having an input that is coupled a decoder output of each of the plurality of decoders and an output coupled to a gate control terminal of one of the plurality of transmission gates.

Regarding claim 10-18, these claims are allowed as being dependent upon independent claim that has been allowed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Vergnes et al. (5,977,805) discloses a digital synthesizer, wherein the digital synthesizer comprising: a clock signal (37), a delay line (41) having a plurality of delay output taps (S1-S (N-1)) which inputted to a multiplexer (33); one or more address inputs (31) to the multiplexer; and a common output (35).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Application/Control Number: 10/036,558

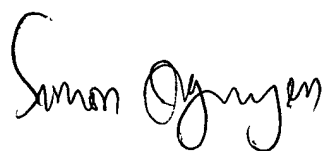
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Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

May 25, 2004

A handwritten signature in cursive script that reads "Simon Nguyen". The signature is written in black ink and is positioned below the typed name and date.